

## INDEX

- ABRAMSON, D. I., P. WASSERMAN and F. A. SENIOR.** Depressor effect of intact rabbit red blood cells in the dog, 402.
- See FRIEDMAN, ABRAMSON and MARX, 285.
- Absorption, intestinal, acute hemorrhage and,** 102.
- of fats into lymphatics, adaptive value of, 466.
- of hydrogenated and oxidized fats, 800.
- of radioactive isotopes, 667.
- Acetylcholine and excitability of muscle,** 372.
- , antagonism of, to pituitary secretion, 142.
- Acid-base equilibrium, thermal tolerance of dogs and,** 264.
- Action potentials of visceral smooth muscle,** 502.
- Adrenal. See Cortico-adrenal.**
- cortex after large doses of cortin, 369.
- cortical hormone, oral assay of, 583.
- Adrenalectomized ferrets, pseudopregnant, progesterone and other hormones in survival of,** 767.
- Adrenalectomy, trauma and shock after,** 22.
- Age, effect of, on hemoglobin of mice,** 511.
- Ammonia formation by kidney,** 66.
- Amniotin and heat production after thyroidectomy,** 114.
- Anaphylactic shock, sympathetic nervous system and,** 637.
- Androgenic substances, quantitative effects of,** 259.
- Anesthesia, chloroform, effect of, on serum amylase and liver esterase,** 149.
- Aorta, size and distensibility of, in hypertension,** 603.
- Appetite changes in vitamin B deficiency,** 596.
- Aqueous humor, chemical mediators in,** 271.
- Arsenic in nutrition of rat,** 205.
- Asphyxia, tetany and, blood potassium in,** 192.
- Atmospheric humidity, reactions of clothed human body to,** 692.
- Atropinized dogs, salivary conditioning in,** 136.
- BACHMANN, G., J. HALDI, C. ENSOR and W. WYNN.** The effect of the ingestion of glucose and of fructose on the rate of excretion of urine and various constituents, 77.
- BARBOUR, H. G. See HEMINGWAY and BARBOUR,** 264.
- BARELARE, B., JR. See RICHTER, HOLT, BARELARE and HAWKES,** 596.
- BARKER, S. B. See PHILLIPS and BARKER,** 202.
- BEAN, J. W. and D. F. BOHR.** High oxygen effects on isolated striated muscle, 576.
- BEARD, H. H.** The relation of the liver to creatine-creatinine metabolism, 530.
- BERGMAN, H. and D. R. DRURY.** The relationship of kidney function to the glucose utilization of the extra abdominal tissues, 279.
- BERNTHAL, T. See WINDER, BERNTHAL and WEEKS,** 238.
- BEST, C. H. See YOUNG, WATERS, MARKOWITZ and BEST,** 295.
- Bile acids of blood and urine after liver injury,** 94.
- BLAIR, E. A. See ERLANGER and BLAIR,** 341.
- BLAIR, H. A.** The effect of acetylcholine on the excitability of the frog's sartorius muscle, 372.
- BLANCHARD, E. W. and R. C. TALLMAN.** The oral assay of adrenal cortical hormone, 583.
- Blood. See Hemoglobin.**

- Blood. *See* Plasma.  
 —. *See* Serum.  
 — and urine, bile acids of, after liver injury, 94.  
 —, arterial, pH of, pH and electrical activity of cerebral cortex, 631.  
 — cells, red, of rabbit, depressor effect of, in dog, 402.  
 — flow, collateral coronary, after vein occlusion, 435.  
 — — in hand, effect of respiratory gas mixtures on, 735.  
 — lactate in sympathectomized dogs, 254.  
 — picture of rats from birth, 620.  
 — plasma and thermal tolerance, 264.  
 — — volume and extracellular fluid, effect of ether on, 391.  
 — potassium in tetany and asphyxia, 192.  
 — pressure. *See* Hypertension.  
 — — after adrenalectomy, 22.  
 — serum potassium, electrocardiographic changes and, 478.  
 — sugar regulation by liver, 558.  
 — supply to various skin areas, 328.  
 —, venous, oxygen saturation of, 13.  
 BOHR, D. F. *See* BEAN and BOHR, 576.  
 BOYD, E. M. and D. W. WHYTE. The effect of extract of the posterior hypophysis on the loss of water by frogs in a dry environment, 759.  
 BOYLE, R. W. *See* McDONALD, BOYLE and DeGROAT, 742.  
 BOZLER, E. The action potentials of visceral smooth muscle, 502.  
 BRADFELD, D. and M. C. SMITH. The ability of the dog to utilize vitamin A from plant and animal sources, 168.  
 Bromsulphalein liver test in assay of lipocae, 642.  
 BROUHA, L. *See* EDWARDS, BROUHA and JOHNSON, 254.  
 BROWNE, J. S. L. *See* ROSE and BROWN, 412.  
 BRUNER, H. D., J. VAN DE ERVE and A. J. CARLSON. The blood picture of rats from birth to twenty-four days of age, 620.  
 CAJORI, F. A. and H. M. VARS. The effect of chloroform anesthesia on serum amylase and liver esterase, 149.  
 CALVIN, D. B. *See* MULLIN, DENNIS and CALVIN, 192.  
 Carbohydrate derivatives in hypoglycemia, 295.  
 —, fat and, metabolism of, 126.  
 — ingestion, high, respiratory exchange during, 246.  
 Carbon dioxide and respiratory rate, 491.  
 — —, insensitivity of diving animals to, 729.  
 — —, respiratory vagal reflexes and, 535.  
 Cardiac control, extra-vagal, through carotid sinus, 421.  
 — glycogen, hyperthyroidism and, 742.  
 — muscle, injured, potential changes in, 717.  
 CARLSON, A. J. *See* BRUNER, VAN DE ERVE and CARLSON, 620.  
 Carotid body, ischemic excitation of, 238.  
 — sinus, extra-vagal cardiac control through, 421.  
 CAVETT, J. W. and W. C. FOSTER. Studies on the formation of ammonia by the kidney, 66.  
 Cerebral cortex, pH and electrical activity of, 631.  
 Cerebrospinal fluid in fetal life, chemistry of, 131.  
 CHARIPPER, H. A. *See* CROSMAN and CHARIPPER, 398.  
 Chemical mediators in aqueous humor, 271.  
 Chloroform anesthesia, effect of, on serum amylase and liver esterase, 149.  
 Cholecystokinin, gall-bladder reaction to, 379.  
 Circulation, coronary, after coronary vein occlusion, 444.  
 Circulatory adjustments, respiratory and, to posture, 457.  
 Cisternal injection of kaolin, hypertension after, 86.  
 Clothing and bodily reactions to temperature, 30.

- Cocaine and ergotamine, effect of, on action of renal pressor substance, 83.
- CONSOLAZIO, W. V. See TALBOTT, COOMBS, CONSOLAZIO and PECORA, 246.
- COOMBS, F. S. See TALBOTT, COOMBS, CONSOLAZIO and PECORA, 246.
- CORNER, G. W. Quantitative studies of experimental menstruation-like bleeding due to hormone deprivation, 1.
- Coronary blood flow, collateral, after vein occlusion, 435.
- circulation after coronary vein occlusion, 444.
- vessels, action of excess Na, Ca and K on, 155.
- Cortico-adrenal hypertrophy and work, 627.
- Cortin and electrolyte changes in muscle, 322.
- , large doses of, adrenal cortex after, 369.
- Creatine-creatinine metabolism, liver and, 530.
- CROSMAN, A. M. and H. A. CHARIPPER. Poly-lobation of the polymorphonuclear neutrophile as a result of work and time ageing, 398.
- CUTTING, R. A., P. S. LARSON and A. M. LANDS. The effect of diuresis on the excretion of glucose in the normal dog during constant glucose infusion, 662.
- DEBEER**, E. J. and A. M. HJORT. An analysis of the basal metabolism, body temperature, pulse rate and respiratory rate of a group of purebred dogs, 517.
- DEGROAT, A. F. See McDONALD, BOYLE and DEGROAT, 742.
- DENNIS, J. See MULLIN, DENNIS and CALVIN, 192.
- Depressor effect of foreign red blood cells, 402.
- DEWALD, D. See GREGG and DEWALD, 435, 444.
- Diet, effect of, on hemoglobin of mice, 511.
- Diuresis and excretion of glucose, 662.
- DONNELLY, J. L. Concerning the metabolism of fat and carbohydrate, 126.
- DONOVAN, P. B. See GOODPASTURE, VERMEULEN, DONOVAN and DRAGSTEDT, 642.
- DOUBILET, H. and A. C. IVY. The response of the smooth muscle of the gall bladder at various intravesical pressures to cholecystokinin, 379.
- DRAGSTEDT, L. R. See GOODPASTURE, VERMEULEN, DONOVAN and DRAGSTEDT, 642.
- DRILL, V. A. and C. R. SHERWOOD. The effect of vitamin B<sub>1</sub> and the vitamin B<sub>2</sub> complex on the weight, food intake and estrual cycle of hyperthyroid rats, 683.
- DRURY, D. R. See BERGMAN and DRURY, 279.
- DUSSER DE BARENNE, J. G., C. S. MARSHALL, W. S. McCULLOCH and L. F. NIMS. Observations on the pH of the arterial blood, the pH and the electrical activity of the cerebral cortex, 631.
- EDEMA**, occurrence of, and oxygenation of fluids, 360.
- EDWARDS, H. T., L. BROUHA and R. E. JOHNSON. Blood lactate in normal and sympathectomized dogs, 254.
- Electrical activity and pH of cerebral cortex, 631.
- Electrocardiographic changes and serum potassium, 478.
- Electrolyte changes in muscle, cortin and, 322.
- ELVEHJEM, C. A. See HOVE, ELVEHJEM and HART, 205, 750.
- Embryo life, maintenance of, after ovariectomy, 484.
- ENSOR, C. See BACHMANN, HALDI, ENSOR and WYNN, 77.
- Ergotamine, cocaine and, effect of, on action of renal pressor substance, 83.
- ERLANGER, J. and E. A. BLAIR. The action of isotonic, salt-free solutions on conduction in medullated nerve fibers, 341.

- Erythrocytes, foreign, depressor effect of, 402.
- ESSEX, H. E. See SOSKIN, ESSEX, HERRICK and MANN, 558.
- Estrogenic substances, relation of, to thyroid function and respiratory metabolism, 114.
- Estrone, testosterone and, effectiveness of, 259.
- Ether, effect of, on plasma volume and extracellular fluid, 391.
- Excretion of glucose, diuresis and, 662.
- Eye, chemical mediators in aqueous humor, after stimulation of, 271.
- EYSTER, J. A. E., W. J. MEEK, H. GOLDBERG and W. E. GILSON. Potential changes in an injured region of cardiac muscle, 717.
- F**AT absorption, effect of hydrogenation and oxidation of fats on, 800.
- and carbohydrate, metabolism of, 126.
- Fats, adaptive value of lymphatic absorption of, 466.
- FENN, W. O. Factors affecting the loss of potassium from stimulated muscles, 213.
- See WILLS and FENN, 72.
- FERGUSON, J. K. W. See HATERIUS and FERGUSON, 314.
- See HITCHCOCK and FERGUSON, 457.
- Fetal life, chemistry of cerebrospinal fluid in, 131.
- FINCH, G. Pilocarpine conditioning, 679.
- Salivary conditioning in atropinized dogs, 136.
- FLEXNER, L. B. Changes in the chemistry and nature of the cerebrospinal fluid during fetal life in the pig, 131.
- Fluid, extracellular, plasma volume and, effect of ether on, 391.
- FOSTER, W. C. See CAVETT and FOSTER, 66.
- FRANCIS, L. D. and L. C. STRONG. Hemoglobin studies on the blood of female mice of the CBA strain: effects of age, diet, strain and reproduction, 511.
- FREEMAN, N. E. and W. McL. WALLACE. The effect of concentrated serum on plasma volume and serum protein concentration, 791.
- FREEMAN, W. See JOHNSON and FREEMAN, 466.
- FRIEDMAN, B., D. I. ABRAMSON and W. MARX. Pressor substance in the cortex of the kidney, 285.
- Fructose, glucose and, urinary constituents after, 77.
- G**AGGE, A. P., C.-E. A. WINSLOW and L. P. HERRINGTON. The influence of clothing on the physiological reactions of the human body to varying environmental temperatures, 30.
- See WINSLOW, HERRINGTON and GAGGE, 51, 692.
- Gall-bladder reaction to cholecystokinin, 379.
- Ganglia, stellate, insulin convulsions after removal of, 202.
- Gas mixtures; respiratory, effect of, on blood flow in hand, 735.
- GAUNT, R. and H. W. HAYS. Role of progesterone and other hormones in survival of pseudopregnant adrenalectomized ferrets, 767.
- GELLHORN, E. and I. E. STECK. The effect of the inhalation of gases with a low oxygen and an increased carbon dioxide-tension on the peripheral blood flow in man, 735.
- GILSON, W. E. See EYSTER, MEEK, GOLDBERG and GILSON, 717.
- Glands, salivary, importance of, to newborn rats, 612.
- GLENN, F. and E. P. LASHER. The effect of destruction of the spinal cord on the artificial production of hypertension in dogs, 106.
- Glucose and fructose, urinary constituents after, 77.
- , excretion of, diuresis and, 662.
- utilization of extra abdominal tissues, kidney function and, 279.
- Glycogen, cardiac, hyperthyroidism and, 742.
- GODFREY, T. M. See IRWIN, WEBER, STEENBOCK and GODFREY, 800.

- GOLDBERG, H. See EYSTER, MEEK, GOLDBERG and GILSON, 717.
- GOODPASTURE, W. C., C. VERMEULEN, P. B. DONOVAN and L. R. DRAGSTEDT. The bromsulphalein liver function test as a method of assay of lipocaeic, 642.
- GREENGARD, H. and A. C. IVY. The isolation of secretin, 427.
- GREGG, D. E. and D. DEWALD. The immediate effects of the occlusion of the coronary veins on collateral blood flow in the coronary arteries, 435.
- . The immediate effects of the occlusion of the coronary veins on the dynamics of the coronary circulation, 444.
- GRIFFITH, J. Q., JR. and E. ROBERTS. Further studies in the mechanism of vascular hypertension following the intracisternal injection of kaolin in the rat, 86.
- H**ALDI, J. See BACHMANN, HALDI, ENSOR and WYNN, 77.
- HAMILTON, J. G. The rates of absorption of the radioactive isotopes of sodium, potassium, chlorine, bromine and iodine in normal human subjects, 667.
- HARRIS, A. S. Mammalian plantar reflexes in terms of afferent fibers, 117.
- HART, E. B. See HOVE, ELVEHJEM and HART, 205, 750.
- HATERIUS, H. O. and J. K. W. FERGUSON. Evidence for the hormonal nature of the oxytocic principle of the hypophysis, 314.
- HAWKES, C. D. See RICHTER, HOLT, BARELARE and HAWKES, 596.
- HAYS, H. W. See GAUNT and HAYS, 767.
- . See SWINGLE, PARKINS, TAYLOR and HAYS, 22.
- Heart. See Ventricle.
- rate, frog, effects of salts and osmotic pressure on, 185.
- HEMINGWAY, A. and H. G. BARBOUR. The thermal tolerance of normal resting dogs as measured by changes of the acid base equilibrium and the dilution-concentration effect of plasma, 264.
- Hemoglobin. See Blood.
- of mice, effects of age, diet, strain and reproduction on, 511.
- Hemorrhage, acute, and intestinal absorption, 102.
- HERRICK, J. F. See SOSKIN, ESSEX, HERRICK and MANN, 558.
- HERRIN, R. C. See YOUNG, MEEK and HERRIN, 470.
- HERRINGTON, I. P. See GAGGE, WINSLOW and HERRINGTON, 30.
- . See WINSLOW, HERRINGTON and GAGGE, 51, 692.
- HERTZ, R. and R. K. MEYER. The effect of surgical reduction of the amount of reacting tissue upon the quantitative effectiveness of testosterone propionate and estrone, 259.
- HERTZMAN, A. B. The blood supply of various skin areas as estimated by the photoelectric plethysmograph, 328.
- Histamine, intravenously injected, fate of, 412.
- HITCHCOCK, F. A. and J. K. W. FERGUSON. Respiratory and circulatory adjustments to the erect posture, 457.
- HJORT, A. M. See DEBEER and HJORT, 517.
- HODES, B. R. See LISSAK and HODES, 637.
- HOFF, H. E. and L. H. NAHUM. The supernormal period in the mammalian ventricle, 591.
- . See WINKLER, HOFF and SMITH, 478.
- HOLT, L. E., JR. See RICHTER, HOLT, BARELARE and HAWKES, 596.
- Hormonal nature of oxytocic principle of hypophysis, 314.
- Hormone, adrenal cortical, oral assay of, 583.
- deprivation, uterine bleeding due to, 1.
- , thyreotropic, organ hypertrophy after, 110.
- Hormones in survival of pseudopregnant adrenalectomized ferrets, 767.

- HOVE, E., C. A. ELVEHJEM and E. B. HART. Arsenic in the nutrition of the rat, 205.
- , —, —. Further studies on zinc deficiency in rats, 750.
- HUBBARD, A. W. and R. H. STETSON. An experimental analysis of human locomotion, 300.
- Humidity, atmospheric, reactions of clothed human body to, 692.
- Hypertension. *See* Blood pressure.
- after cisternal injection of kaolin, 86.
- , experimental, after destruction of cord, 106.
- , size and distensibility of aorta in, 603.
- Hyperthyroid rats, effect of vitamin B in, 683.
- Hyperthyroidism and cardiac glycogen, 742.
- Hypoglycemia, carbohydrate derivatives in, 295.
- Hypophysectomized rats, action of insulin and anterior pituitary extract on, 774.
- Hypophysectomy, menopause urine injections after, 174.
- Hypophysis extract, posterior, and water loss by frogs, 759.
- , hormonal nature of oxytocic principle of, 314.
- INGLE, D. J. The effects of administering large amounts of cortin on the adrenal cortices of normal and hypophysectomized rats, 369.
- The time for the occurrence of cortico-adrenal hypertrophy in rats during continued work, 627.
- Inhibition, intestinal, during intestinal distention, 470.
- Insulin and anterior pituitary extract, action of, on hypophysectomized rats, 774.
- and protein metabolism after nephrectomy, 569.
- convulsions after removal of stellate ganglia, 202.
- Intestinal absorption, acute hemorrhage and, 102.
- Intestinal inhibition during intestinal distention, 470.
- IRVING, L. The insensitivity of diving animals to CO<sub>2</sub>, 729.
- IRWIN, M. H., J. WEBER, H. STEENROCK and T. M. GODFREY. The influence of hydrogenation and oxidation of fats upon their rate of absorption, 800.
- Ischemic excitation of carotid body, 238.
- Isotonic salt-free solutions and nerve conduction, 341.
- Isotopes, radioactive, absorption of, 667.
- IVY, A. C. *See* DOUBILET and IVY, 379.
- *See* GREENGARD and IVY, 427.
- JOHNSON, R. E. *See* EDWARDS, BROCHA and JOHNSON, 254.
- *See* SNYDER, JOHNSON and PEEK, 704.
- JOHNSON, V. and W. FREEMAN. The adaptive value of absorption of fats into the lymphatics, 466.
- JONES, J. H. The metabolism of calcium and phosphorus as influenced by the addition to the diet of salts of metals which form insoluble phosphates, 230.
- KADISH, M. A. *See* MENKIN and KADISH, 524.
- Kaolin, hypertension after cisternal injection of, 86.
- KATZ, L. N. and E. LINDNER. The action of excess Na, Ca and K on the coronary vessels, 155.
- KEYS, A. The oxygen saturation of the venous blood in normal human subjects, 13.
- Kidney. *See* Renal.
- , ammonia formation by, 66.
- function and glucose utilization of extra abdominal tissues, 279.
- , pressor substance in cortex of, 285.
- LACTATE, blood, in sympathectomized dogs, 254.
- LANDS, A. M. *See* CUTTING, LARSON and LANDS, 662.
- LARSON, P. S. *See* CUTTING, LARSON and LANDS, 662.

- LASHER, E. P. See GLENN and LASHER, 106.
- Leukotaxine, physiological effects of, 524.
- LEVIN, L. See TYNDALE, LEVIN and SMITH, 174.
- LICHTMAN, S. S. The influence of experimental biliary obstruction and liver injury upon the total bile acid content and partition in blood and urine, 94.
- LINDNER, E. See KATZ and LINDNER, 155.
- Lipocaeic, bromsulphalein liver test in assay of, 642.
- LISSÁK, K. The influence of piperidino-methylbenzodioxane (933F) on the action of sympathin, 62.
- and B. R. HODES. The sympathetic nervous system and anaphylactic shock, 637.
- See LUCO and LISSÁK, 271.
- Liver and creatine-creatinine metabolism, 530.
- esterase, effect of chloroform anesthesia on serum amylase and, 149.
- injury, bile acids of blood and urine after, 94.
- , perfused, uptake and output of substances by, 704.
- , regulation of blood sugar by, 558.
- , vascular and volume changes in, 647.
- Locomotion, human, analysis of, 300.
- LOWTHER, S. See MURPHY, LOWTHER and PAGNIELLO, 110.
- LUCO, J. V. and K. LISSÁK. Chemical mediators in the aqueous humor, 271.
- Lymphatic absorption of fats, adaptive value of, 466.
- M**CALLISTER, F. F. The effect of ether anesthesia on the volume of plasma and extracellular fluid, 391.
- McCULLOCH, W. S. See DUSSEY DE BARENNE, MARSHALL, McCULLOCH and NIMS, 631.
- McDONALD, C. H., R. W. BOYLE and A. F. DEGROAT. Hyperthyroidism and cardiac glycogen, 742.
- MANN, F. C. See SOSKIN, ESSEX, HER-  
RICK and MANN, 558.
- MARKOWITZ, J. See YOUNG, WATERS, MARKOWITZ and BEST, 295.
- MARSHALL, C. S. See DUSSEY DE BARENNE, MARSHALL, McCULLOCH and NIMS, 631.
- MARX, W. See FRIEDMAN, ABRAMSON and MARX, 285.
- MAURER, F. W. Isolation and analysis of extracellular muscle fluid from the frog, 546.
- MEEK, W. J. See EYSTER, MEEK, GOLDBERG and GILSON, 717.
- See YOUNG, MEEK and HER-  
RIN, 470.
- MENKIN, V. and M. A. KADISH. Studies on the physiological effects of leukotaxine, 524.
- Menopause urine injections after hypophysectomy, 174.
- Menstrual cycle, rôle of ovarian hormones in, 1.
- Metabolism, basal, of purebred dogs, 517.
- , creatine-creatinine, liver and, 530.
- of calcium and phosphorus in metal rickets, 230.
- of fat and carbohydrate, 126.
- , protein, after nephrectomy, insulin and, 569.
- , respiratory, after thyroidectomy, amniotin and, 114.
- MEYER, R. K. See HERTZ and MEYER, 259.
- MIRSKY, I. A. The influence of insulin on the protein metabolism of nephrectomized dogs, 569.
- MULLIN, F. J., J. DENNIS and D. B. CALVIN. Blood potassium in tetany and asphyxia of dogs, 192.
- MURPHY, R., S. LOWTHER and L. PAGNIELLO. Organ hypertrophy following injections of thyrotropic hormone, 110.
- Muscle, electrolyte changes in, cortin and, 322.
- excitability, acetylcholine and, 372.
- fluid, extracellular, isolation and analysis of, 546.
- injured cardiac, potential changes in, 717.
- , isolated striated, high oxygen effects on, 576.



- Muscle, visceral smooth, action potentials of, 502.
- Muscles, stimulated, loss of potassium from, 213.
- NAHUM, L. H.** See **HOFF** and **NAHUM**, 591.
- NECHELES, H.** and **F. NEUWELT.** Antagonism between posterior pituitary secretion and acetylcholine, 142.
- Nephrectomy, insulin and protein metabolism after, 569.
- Nerve conduction, isotonic salt-free solutions and, 341.
- reflexes, plantar, in terms of afferent fibers, 117.
- Nervous system, sympathetic, and anaphylactic shock, 637.
- Neutrophile, polymorphonuclear, polylobation of, 398.
- NEUWELT, F.** See **NECHELES** and **NEUWELT**, 142.
- NICHOLSON, H. C.** See **SOBIN** and **NICHOLSON**, 491.
- NIMS, L. F.** See **DUSSER DE BARENNE, MARSHALL, McCULLOCH** and **NIMS**, 631.
- NORTHUP, D. W.** See **VAN LIERE, NORTHUP** and **SLEETH**, 102.
- Nutrition of rat, arsenic in, 205.
- ORGAN** hypertrophy after thyrotropic hormone, 110.
- Osmotic pressure, effects of salts and, on frog heart rate, 185.
- Ovariectomy, maintenance of embryo life after, 484.
- Oxygen effects, high, on isolated striated muscle, 576.
- saturation of venous blood, 13.
- Oxygenation of fluids and occurrence of edema, 360.
- Oxytocic principle of hypophysis, hormonal nature of, 314.
- PAGNIELLO, L.** See **MURPHY, LOWTHER** and **PAGNIELLO**, 110.
- PARKINS, W. M.** See **SWINGLE, PARKINS, TAYLOR** and **HAYS**, 22.
- PECORA, L. J.** See **TALBOTT, COOMBS, CONSOLAZIO** and **PECORA**, 246.
- PEEK, C. McI.** See **SNYDER, JOHNSON** and **PEEK**, 704.
- PHILLIPS, R. A.** and **S. B. BARKER.** Insulin convulsions after removal of the stellate ganglia, 202.
- Pilocarpine conditioning, 679.
- PINCUS, G.** and **N. T. WERTHESEN.** The maintenance of embryo life in ovariectomized rabbits, 484.
- Piperidinomethylbenzodioxane (933F) and sympathin, 62.
- Pituitary extract, anterior, action of insulin and, on hypophysectomized rats, 774.
- secretion, antagonism of acetylcholine to, 142.
- PLAGGE, J. C.** The vital importance of salivary glands to newborn rats, 612.
- Plantar reflexes in terms of afferent fibers, 117.
- Plasma. See **Blood**.
- volume after injection of concentrated serum, 791.
- Plethysmograph, photoelectric, 328.
- Polylobation of polymorphonuclear neutrophile, 398.
- Posture, respiratory and circulatory adjustments to, 457.
- Postural changes, effect of, on skin temperatures, 161.
- Potassium changes in submaxillary glands during stimulation, 72.
- , loss of, from stimulated muscles, 213.
- of blood in tetany and asphyxia, 192.
- , serum, electrocardiographic changes and, 478.
- Pregnant, pseudo-, adrenalectomized ferrets, progesterone and other hormones in survival of, 767.
- Pressor substance in cortex of kidney, 285.
- Progesterone and other hormones in survival of pseudopregnant adrenalectomized ferrets, 767.
- Protein metabolism after nephrectomy, insulin and, 569.
- Pulse rate of purebred dogs, 517.
- RADIOACTIVE** isotopes, absorption of, 667.
- Reactions of clothed human body to atmospheric humidity, 692.



- Reflexes, plantar, in terms of afferent fibers, 117.
- , respiratory vagal, and carbon dioxide, 535.
- Renal. *See* Kidney.
- pressor substance, drugs and action of, 83.
- Reproduction, effect of, on hemoglobin of mice, 511.
- Respiration and vasoconstriction due to ischemic excitation of carotid body, 238.
- Respiratory and circulatory adjustments to posture, 457.
- exchange during high carbohydrate ingestion, 246.
- gas mixtures and blood flow in hand, 735.
- rate, carbon dioxide and, 491.
- of purebred dogs, 517.
- vagal reflexes and carbon dioxide, 535.
- RICE, H. V. Respiratory vagal reflexes and carbon dioxide, 535.
- RICHTER, C. P., L. E. HOLT, JR., B. BARELARE, JR. and C. D. HAWKES. Changes in fat, carbohydrate and protein appetite in vitamin B deficiency, 596.
- Rickets, metal, 230.
- ROBERTS, E. *See* GRIFFITH and ROBERTS, 86.
- ROSE, B. and J. S. L. BROWNE. The distribution and rate of disappearance of intravenously injected histamine in the rat, 412.
- ROTH, G. M., M. M. D. WILLIAMS and C. SHEARD. Changes in the skin temperatures of the extremities produced by changes in posture, 161.
- RUSSELL, J. A. The action of insulin and of anterior pituitary extract in normal and hypophysectomized rats, 774.
- SALIVARY** conditioning in atropinized dogs, 136.
- glands, importance of, to newborn rats, 612.
- Salt-free solutions, isotonic, and nerve conduction, 341.
- Salts, excess, action of, on coronary vessels, 155.
- Salts and osmotic pressure, effects of, on frog heart rate, 185.
- SASLOW, G. The relation between the oxygenation of fluids and the occurrence of edema in the perfused frog web, 360.
- Secretin, isolation of, 427.
- Secretion, pituitary, antagonism of acetylcholine to, 142.
- SENIOR, F. A. *See* ABRAMSON, WASSERMAN and SENIOR, 402.
- Serum. *See* Blood.
- amylase and liver esterase, effect of chloroform anesthesia on, 149.
- protein concentration after injection of concentrated serum, 791.
- SHEARD, C. *See* ROTH, WILLIAMS and SHEARD, 161.
- SHERWOOD, C. R. *See* DRILL and SHERWOOD, 683.
- SHERWOOD, T. C. The relation of estrogenic substances to thyroid function and respiratory metabolism 114.
- Shock, anaphylactic, sympathetic nervous system and, 637.
- , trauma and, after adrenalectomy, 22.
- Skin areas, blood supply to, 328.
- temperature affected by change of posture, 161.
- SLEETH, C. K. *See* VAN LIERE, NORTHUP and SLEETH, 102.
- SMITH, M. C. *See* BRADFIELD and SMITH, 168.
- SMITH, P. E. *See* TYNDALE, LEVIN and SMITH, 174.
- SMITH, P. K. *See* WINKLER, HOFF and SMITH, 478.
- SNYDER, C. D. Vascular events and volume changes in the turtle's liver surviving in an oncometer, 647.
- , R. E. JOHNSON and C. McI. PEEK. The minute-volume uptake and output of substances perfused through liver surviving in an oncometer, 704.
- SOBIN, S. and H. C. NICHOLSON. An analysis of the factors involved in the varying effects of carbon dioxide upon respiratory rate, 491.

- SOSKIN, S., H. E. ESSEX, J. F. HERRICK and F. C. MANN. The mechanism of regulation of the blood sugar by the liver, 558.
- SPEALMAN, C. R. The effects of NaCl, KCl,  $\text{CaCl}_2$  and osmotic pressure on the frog-heart rate, 185.
- Spinal cord, experimental hypertension after destruction of, 106.
- STECK, I. E. See GELLHORN and STECK, 735.
- STEENBOCK, H. See IRWIN, WEBER, STEENBOCK and GODFREY, 800.
- Stellate ganglia, insulin convulsions after removal of, 202.
- STETSON, R. H. See HUBBARD and STETSON, 300.
- Stimulation of submaxillary glands, potassium changes during, 72.
- STRONG, L. C. See FRANCIS and STRONG, 511.
- Submaxillary glands, potassium changes in, during stimulation, 72.
- SWINGLE, W. W., W. M. PARKINS, A. R. TAYLOR and H. W. HAYS. A study of the circulatory failure and shock following trauma to the healthy, vigorous adrenalectomized dog, 22.
- Sympathectomized dogs, blood lactate in, 254.
- Sympathetic nervous system and anaphylactic shock, 637.
- Sympathin, piperidinomethylbenzodioxane (933F) and, 62.
- T**TALBOTT, J. H., F. S. COOMBS, W. V. CONSOLAZIO and L. J. PECORA. Respiratory exchange during high carbohydrate ingestion, 246.
- TALLMAN, R. C. See BLANCHARD and TALLMAN, 583.
- TAYLOR, A. R. See SWINGLE, PARKINS, TAYLOR and HAYS, 22.
- Temperature, body, of purebred dogs, 517.
- , clothing and bodily reactions to, 30
- , regulation of clothed body, 51.
- , skin, affected by change of posture, 161.
- Testosterone and estrone, effectiveness of, 259.
- Tetany and asphyxia, blood potassium in, 192.
- Thermal tolerance of dogs and acid-base equilibrium, 264.
- Thyreotropic hormone, organ hypertrophy after, 110.
- Thyroidectomy, amniotin and heat production after, 114.
- TIPTON, S. R. The effect of cortin on the electrolyte changes in cat muscle during stimulation and recovery, 322.
- Trauma and shock after adrenalectomy, 22.
- TYNDALE, H. H., L. LEVIN and P. E. SMITH. Responses of normal and hypophysectomized immature rats to menopause urine injections, 174.
- U**Urinary constituents after glucose and fructose, 77.
- Urine, blood and, bile acids of, after liver injury, 94.
- , injections, menopause, after hypophysectomy, 174.
- Uterine bleeding due to hormone deprivation, 1.
- V**VAN DE ERVE, J. See BRUNER, VAN DE ERVE and CARLSON, 620.
- VAN LIERE, E. J., D. W. NORTHUP and C. K. SLEETH. The effect of acute hemorrhage on absorption from the small intestine, 102.
- VARS, H. M. See CAJORI and VARS, 149.
- Vascular and volume changes in perfused liver, 647.
- Vasoconstriction, respiration and, due to ischemic excitation of carotid body, 238.
- Vein occlusion, collateral coronary blood flow after, 435.
- Velous blood, oxygen saturation of, 13.
- Ventricle. See Heart.
- , mammalian, supernormal period in, 591.
- VERMEULEN, C. See GOODPASTURE, VERMEULEN, DONOVAN and DRAGSTEDT, 642.
- Vitamin A, utilization of, by dog, 168.
- Vitamin B deficiency, appetite in, 596.
- , effect of, in hyperthyroid rats, 683.

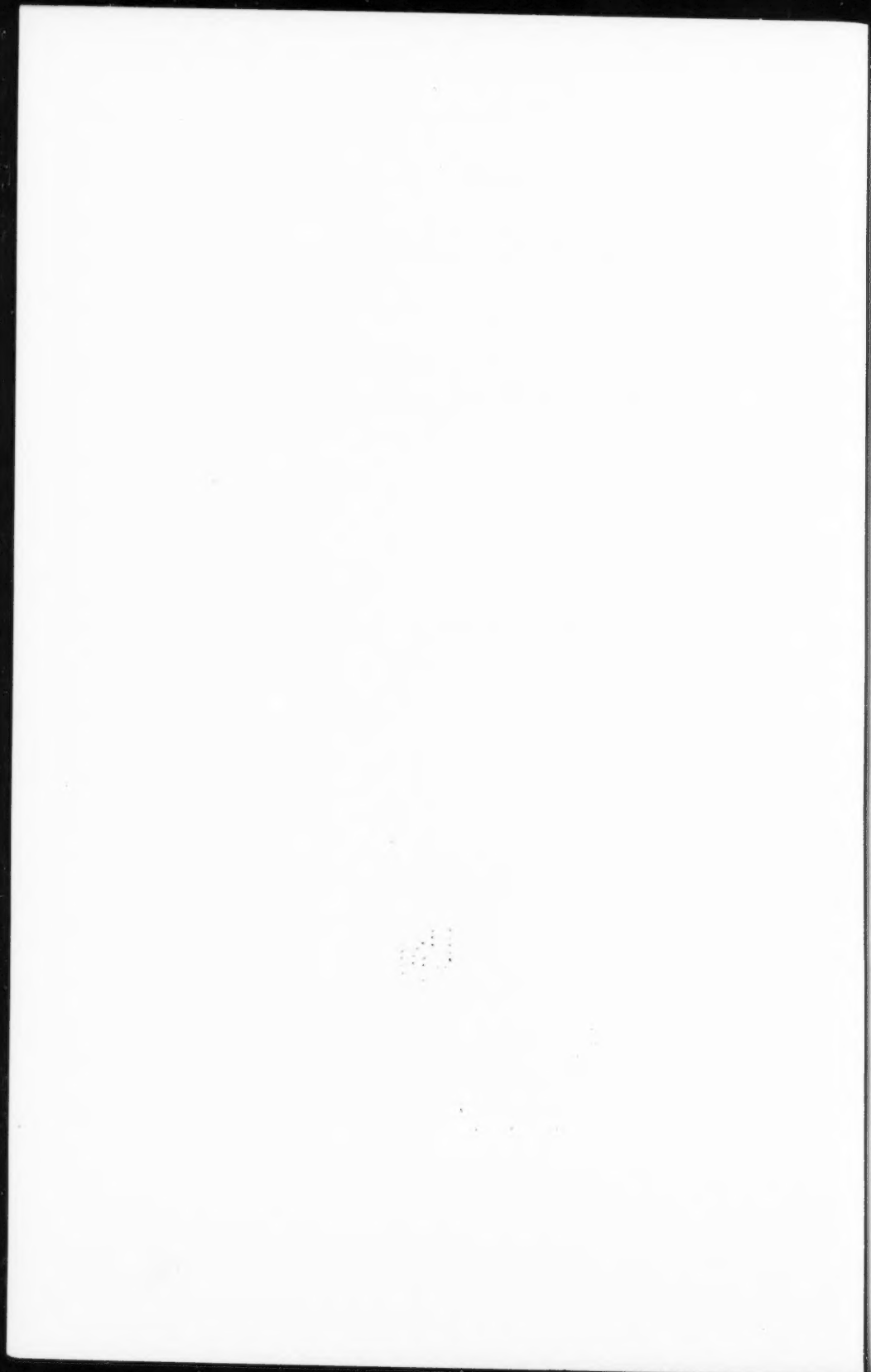
- WALLACE, W. McL. See FREEMAN and WALLACE, 791.
- WASSERMAN, P. See ABRAMSON, WASSERMAN and SENIOR, 402.
- Water loss by frogs, posterior hypophysis extract and, 759.
- WATERS, E. T. See YOUNG, WATERS, MARKOWITZ and BEST, 295.
- WEBER, J. See IRWIN, WEBER, STEENBOCK and GODFREY, 800.
- WEEKS, W. F. See WINDER, BERNTHAL and WEEKS, 238.
- WÉGRIA, R. See WIGGERS and WÉGRIA, 603.
- WERTHESSEN, N. T. See PINCUS and WERTHESSEN, 484.
- WHYTE, D. W. See BOYD and WHYTE, 759.
- WIGGERS, C. J. and R. WÉGRIA. Active changes in size and distensibility of the aorta during acute hypertension, 603.
- WILLIAMS, J. R., Jr. The effect of cocaine and of ergotamine on the action of the renal pressor substance, 83.
- WILLIAMS, M. M. D. See ROTH, WILLIAMS and SHEARD, 161.
- WILLS, J. H. and W. O. FENN. Potassium changes in submaxillary glands during stimulation, 72.
- WINDER, C. V. Quantitative observations on the extra-vagal component of carotid sinus pressoreceptive cardiac restraint, 421.
- , T. BERNTHAL and W. F. WEEKS. Reflex hyperpnea and vasoconstriction due to ischemic excitation of the carotid body, 238.
- WINKLER, A. W., H. E. HOFF and P. K. SMITH. Electrocardiographic changes and concentration of potassium in serum following intravenous injection of potassium chloride, 478.
- WINSLOW, C.-E. A., L. P. HERRINGTON and A. P. GAGGE. The relative influence of radiation and convection upon the temperature regulation of the clothed body, 51.
- , —, —, —. The reactions of the clothed human body to variations in atmospheric humidity, 692.
- , —. See GAGGE, WINSLOW and HERRINGTON, 30.
- Work, cortico-adrenal hypertrophy and, 627.
- WYNN, W. See BACHMANN, HALDI, ENSOR and WYNN, 77.
- YOUMANS, W. B., W. J. MEEK and R. C. HERRIN. Extrinsic and intrinsic pathways concerned with intestinal inhibition during intestinal distention, 470.
- YOUNG, F. G., E. T. WATERS, J. MARKOWITZ and C. H. BEST. The effect of the administration of some carbohydrate derivatives on the hypoglycemic symptoms of the hepatectomized dog, 295.
- ZINC deficiency in rats, 750.



THE  
AMERICAN JOURNAL  
OF  
PHYSIOLOGY

VOLUME 124

BALTIMORE, MD.  
1938



# CONTENTS

NO. 1. OCTOBER, 1938

Experimental Menstruation-like Bleeding Due to Hormone Deprivation. <i>G. W. Corner</i> .....	1
The Oxygen Saturation of the Venous Blood in Normal Human Subjects. <i>Ansel Keys</i> .....	13
A Study of the Circulatory Failure and Shock Following Trauma to the Healthy, Vigorous Adrenalectomized Dog. <i>W. W. Swingle, W. M. Parkins, A. R. Taylor and H. W. Hays</i> .....	22
The Influence of Clothing on the Physiological Reactions of the Human Body to Varying Environmental Temperatures. <i>A. P. Gagge, C.-E. A. Winslow and L. P. Herrington</i> .....	30
The Relative Influence of Radiation and Convection upon the Temperature Regulation of the Clothed Body. <i>C.-E. A. Winslow, L. P. Herrington and A. P. Gagge</i> .....	51
Influence of Piperidinomethylbenzodioxane on the Action of Sympathin. <i>K. Lissák</i> .....	62
Studies on the Formation of Ammonia by the Kidney. <i>J. W. Cavett and W. C. Foster</i> .....	66
Potassium Changes in Submaxillary Glands During Stimulation. <i>J. H. Wills and W. O. Fenn</i> .....	72
Effects of Ingestion of Glucose and Fructose on Rate of Excretion of Urine and Various Constituents. <i>George Bachmann, John Haldi, Charles Ensor and Winfrey Wynn</i> .....	77
Effect of Cocaine and Ergotamine on Renal Pressor Substance. <i>John R. Williams, Jr.</i> .....	83
Further Studies in the Mechanism of Vascular Hypertension Following the Intracisternal Injection of Kaolin in the Rat. <i>J. Q. Griffith, Jr. and E. Roberts</i> .....	86
The Influence of Experimental Biliary Obstruction and Liver Injury upon the Total Bile Acid Content and Partition in Blood and Urine. <i>S. S. Lichtman</i> .....	94
The Effect of Acute Hemorrhage on Absorption from the Small Intestine. <i>Edward J. Van Liere, David W. Northrup and Clark K. Sleeth</i> .....	102
Destruction of Spinal Cord and Production of Hypertension. <i>F. Glenn and E. P. Lasher</i> .....	106
Organ Hypertrophy Following Injections of Thyreotropic Hormone. <i>Rosemary Murphy, Stephanie Lowther and Lucia Pagnello</i> .....	110
Estrogenic Substances and Thyroid Function and Respiratory Metabolism. <i>T. C. Sherwood</i> .....	114
Mammalian Plantar Reflexes in Terms of Afferent Fibers. <i>A. Sidney Harris</i> .....	117
Concerning the Metabolism of Fat and Carbohydrate. <i>Joseph L. Donnelly</i> .....	126
Chemistry and Nature of Cerebrospinal Fluid During Fetal Life. <i>Louis B. Flexner</i> .....	131
Salivary Conditioning in Atropinized Dogs. <i>Glen Finch</i> .....	136
Antagonism Between Pituitary Secretion and Acetylcholine. <i>H. Necheles and F. Newwett</i> .....	142



Effect of Chloroform on Serum Amylase and Liver Esterase. <i>F. A. Cajori and H. M. Vars</i>	149
The Action of Excess Na, Ca and K on the Coronary Vessels. <i>L. N. Katz and E. Lindner</i>	155
Changes in the Skin Temperatures of the Extremities Produced by Changes in Posture. <i>Grace M. Roth, Marvin M. D. Williams and Charles Sheard</i>	161
Ability of Dog to Utilize Vitamin A. <i>Dorothy Bradfield and Margaret Cammack Smith</i>	168
Responses of Normal and Hypophysectomized Immature Rats to Menopause Urine Injections. <i>H. H. Tyndale, Louis Levin and P. E. Smith</i>	174
Effects of NaCl, KCl, CaCl <sub>2</sub> , and Osmotic Pressure on Frog-Heart Rate. <i>C. R. Spealman</i>	185
Blood Potassium in Tetany and Asphyxia. <i>F. J. Mullin, Joe Dennis and D. Bailey Calvin</i>	192
Insulin Convulsions after Removal of Stellate Ganglia. <i>R. A. Phillips and S. B. Barker</i>	202
Arsenic in the Nutrition of the Rat. <i>E. Hore, C. A. Elvehjem and E. B. Hart</i>	205
Factors Affecting the Loss of Potassium from Stimulated Muscles. <i>Wallace O. Fenn</i>	213
Metabolism of Calcium and Phosphorus. <i>James H. Jones</i>	230
Reflex Hyperpnea and Vasoconstriction Due to Ischemic Excitation of the Carotid Body. <i>Claude V. Winder, Theodore Bernthal and William F. Weeks</i>	238
Respiratory Exchange During High Carbohydrate Ingestion. <i>John H. Talbott, F. S. Coombs, W. V. Consolazio and L. J. Pecora</i>	246
Blood Lactate in Normal and Sympathectomized Dogs. <i>H. T. Edwards, L. Brouha and R. E. Johnson</i>	254
The Effect of Surgical Reduction of the Amount of Reacting Tissue upon the Quantitative Effectiveness of Testosterone Propionate and Estrone. <i>R. Hertz and R. K. Meyer</i>	259
Thermal Tolerance of Resting Dogs as Measured by Changes of Acid Base Equilibrium and Dilution-Concentration Effect of Plasma. <i>A. Hemingway and H. G. Barbour</i>	264
Chemical Mediators in the Aqueous Humor. <i>J. V. Luco and K. Lissak</i>	271
NO. 2. NOVEMBER, 1938	
The Relationship of Kidney Function to the Glucose Utilization of the Extra Abdominal Tissues. <i>Hyman Bergman and D. R. Drury</i>	279
Pressor Substance in Cortex of Kidney. <i>B. Friedman, D. I. Abramson and W. Marx</i>	285
Effect of Administration of some Carbohydrate Derivatives on Hypoglycemic Symptoms of Hepatectomized Dog. <i>F. G. Young, E. T. Waters, J. Markowitz and C. H. Best</i>	295
An Experimental Analysis of Human Locomotion. <i>A. W. Hubbard and R. H. Stetson</i>	300
Evidence for the Hormonal Nature of the Oxytocic Principle of the Hypophysis. <i>H. O. Haterius and J. K. W. Ferguson</i>	314
The Effect of Cortin on the Electrolyte Changes in Cat Muscle During Stimulation and Recovery. <i>S. R. Tipton</i>	322
The Blood Supply of Various Skin Areas as Estimated by the Photoelectric Plethysmograph. <i>Atrick B. Hertzman</i>	328
The Action of Isotonic, Salt-Free Solutions on Conduction in Medullated Nerve Fibers. <i>Joseph Erlanger and Edgar A. Blair</i>	341
Oxygenation of Fluids and Occurrence of Edema in the Perfused Frog Web. <i>G. Saslow</i>	360

The Effects of Administering Large Amounts of Cortin on the Adrenal Cortices of Normal and Hypophysectomized Rats. <i>Dwight J. Ingle</i> .....	369
Effect of Acetylcholine on Excitability of Frog's Sartorius Muscle. <i>H. A. Blair</i> ..	372
The Response of the Smooth Muscle of the Gall Bladder at Various Intravesical Pressures to Cholecystokinin. <i>H. Doubilet and A. C. Ivy</i> .....	379
Effect of Ether Anesthesia on Plasma and Extracellular Fluid. <i>F. F. McAllister</i> ..	391
Poly-Lobation of the Polymorphonuclear Neutrophile as a Result of Work and Time Ageing. <i>Arthur M. Croxson and Harry A. Charipper</i> .....	398
Depressor Effect of Intact Rabbit Red Blood Cells in the Dog. <i>David I. Abramson, Philip Wassermann and Fanny A. Senior</i> .....	402
Disappearance of Intravenously Injected Histamine. <i>B. Rose and J. S. L. Browne</i> .....	412
Extra-Vagal Component of Carotid Sinus Pressoreceptive Cardiac Restraint. <i>C. V. Winder</i> .....	421
The Isolation of Secretin. <i>Harry Greengard and A. C. Ivy</i> .....	427
The Immediate Effects of the Occlusion of the Coronary Veins on Collateral Blood Flow in the Coronary Arteries. <i>Donald E. Gregg and Donald Dewald</i> .....	435
The Immediate Effects of the Occlusion of the Coronary Veins on the Dynamics of the Coronary Circulation. <i>Donald E. Gregg and Donald Dewald</i> .....	444
Respiratory and Circulatory Adjustments to the Erect Posture. <i>Fred A. Hitchcock and J. K. W. Ferguson</i> .....	457
Adaptive Value of Absorption of Fats into Lymphatics. <i>V. Johnson and W. Freeman</i> .....	466
Extrinsic and Intrinsic Pathways Concerned with Intestinal Inhibition During Intestinal Distention. <i>W. B. Youmans, W. J. Meek and R. C. Herrin</i> .....	470
Electrocardiographic Changes and Concentration of Potassium in Serum Following Intravenous Injection of Potassium Chloride. <i>A. W. Winkler, H. E. Hoff and P. K. Smith</i> .....	478
Embryo Life in Ovariectomized Rabbits. <i>G. Pincus and N. T. Werthessen</i> .....	484
An Analysis of the Factors Involved in the Varying Effects of Carbon Dioxide Upon Respiratory Rate. <i>Sidney Sobin and Hayden C. Nicholson</i> .....	491
The Action Potentials of Visceral Smooth Muscle. <i>Emil Bozler</i> .....	502
Hemoglobin Studies on the Blood of Female Mice of the CBA Strain: Effects of Age, Diet, Strain, and Reproduction. <i>Lillias D. Francis and Leonell C. Strong</i> .....	511
An Analysis of the Basal Metabolism, Body Temperature, Pulse Rate and Respiratory Rate of a Group of Purebred Dogs. <i>Edwin J. de Beer and Axel M. Hjort</i> .....	517
Studies on the Physiological Effects of Leukotaxine. <i>Valy Menkin and M. A. Kadish</i> .....	524
The Relation of the Liver to Creatine-Creatinine Metabolism. <i>Howard H. Beard</i> ..	530
Respiratory Vagal Reflexes and Carbon Dioxide. <i>H. V. Rice</i> .....	535
Isolation and Analysis of Extracellular Muscle Fluid from the Frog. <i>Frank W. Maurer</i> .....	546
The Mechanism of Regulation of the Blood Sugar by the Liver. <i>Samuel Soskin, Hiram E. Essex, J. F. Herrick and Frank C. Mann</i> .....	558

## No. 3. DECEMBER, 1938

The Influence of Insulin on the Protein Metabolism of Nephrectomized Dogs. <i>I. Arthur Mirsky. With the technical assistance of Dorothea Hamm</i> .....	569
High Oxygen Effects on Isolated Striated Muscle. <i>John W. Bean and David F. Boh</i> .....	576
The Oral Assay of Adrenal Cortical Hormone. <i>E. W. Blanchard and R. C. Tallman</i> .....	583

The Supernormal Period in the Mammalian Ventricle. <i>H. E. Hoff and L. H. Nahum</i> .....	591
Changes in Fat, Carbohydrate and Protein Appetite in Vitamin B Deficiency. <i>Curt P. Richter, L. E. Holt, Jr., Bruno Barelare, Jr., and Clarence D. Hawkes</i> .....	596
Active Changes in Size and Distensibility of the Aorta During Acute Hypertension. <i>Carl J. Wiggers and René Wégria</i> .....	603
The Vital Importance of Salivary Glands to Newborn Rats. <i>James C. Plagge</i> .....	612
The Blood Picture of Rats from Birth to Twenty-four Days of Age. <i>H. D. Bruner, J. van de Erve and A. J. Carlson</i> .....	620
The Time for the Occurrence of Cortico-Adrenal Hypertrophy in Rats During Continued Work. <i>Dwight J. Ingle</i> .....	627
Observations on the pH of the Arterial Blood, the pH and the Electrical Activity of the Cerebral Cortex. <i>J. G. Dusser de Barenne, Clyde S. Marshall, W. S. McCulloch and Leslie F. Nims</i> .....	631
The Sympathetic Nervous System and Anaphylactic Shock. <i>K. Lissak and B. R. Hodes</i> .....	637
The Bromsulphalein Liver Function Test as a Method of Assay of Lipocaic. <i>W. Carter Goodpasture, C. Vermeulen, Paul B. Donovan, and Lester R. Dragstedt</i> .....	642
Vascular Events and Volume Changes in the Turtle's Liver Surviving in an Oncometer. <i>Charles D. Snyder</i> .....	647
The Effect of Diuresis on the Excretion of Glucose in the Normal Dog During Constant Glucose Infusion. <i>R. A. Cutting, P. S. Larson and A. M. Lands</i> .....	662
The Rates of Absorption of the Radioactive Isotopes of Sodium, Potassium, Chlorine, Bromine, and Iodine in Normal Human Subjects. <i>Joseph G. Hamilton</i> .....	667
Pilocarpine Conditioning. <i>Glen Finch</i> .....	679
The Effect of Vitamin B <sub>1</sub> and the Vitamin B <sub>2</sub> Complex on the Weight, Food Intake, and Estrual Cycle of Hyperthyroid Rats. <i>Victor A. Drill and Catherine R. Sherwood</i> .....	683
The Reactions of the Clothed Human Body to Variations in Atmospheric Humidity. <i>C.-E. A. Winslow, L. P. Herrington, and A. P. Gagge</i> .....	692
The Minute-Volume Uptake and Output of Substances Perfused Through Liver Surviving in an Oncometer. <i>C. D. Snyder, R. E. Johnson and C. McI. Peek</i> .....	704
Potential Changes in an Injured Region of Cardiac Muscle. <i>J. A. E. Eyster, Walter J. Meek, H. Goldberg and W. E. Gilson</i> .....	717
The Insensitivity of Diving Animals to CO <sub>2</sub> . <i>Laurence Irving</i> .....	729
The Effect of the Inhalation of Gases with a Low Oxygen and an Increased Carbon Dioxide-Tension on the Peripheral Blood Flow in Man. <i>Ernst Gellhorn and Irving E. Steck</i> .....	735
Hyperthyroidism and Cardiac Glycogen. <i>C. H. McDonald, R. W. Boyle and A. F. De Groat</i> .....	742
Further Studies on Zinc Deficiency in Rats. <i>E. Hove, C. A. Elvehjem and E. B. Hart</i> .....	750
The Effect of Extract of the Posterior Hypophysis on the Loss of Water by Frogs in a Dry Environment. <i>Eldon M. Boyd and D. W. Whyte</i> .....	759
Rôle of Progesterone and Other Hormones in Survival of Pseudopregnant Adrenalectomized Ferrets. <i>Robert Gaunt and H. W. Hays</i> .....	767
The Action of Insulin and of Anterior Pituitary Extract in Normal and Hypophysectomized Rats. <i>Jane A. Russell</i> .....	774
The Effect of Concentrated Serum on Plasma Volume and Serum Protein Concentration. <i>Norman E. Freeman and William McL. Wallace</i> .....	791
The Influence of Hydrogenation and Oxidation of Fats upon Their Rate of Absorption. <i>Margaret House Irwin, Janet Weber, H. Steenbock and T. M. Godfrey</i> .....	800
Index .....	805